WHAT IS CLAIMED IS:

1. A process for the preparation of a haloalkyldialkylchlorosilane of formula (I):

$$Hal-(R^2R^3)Si-(CH_2)_s-Hal$$

by the hydrosilylation reaction of a reaction medium comprising a silane of formula (II):

$$Hal-(R^2R^3)Si-H$$

and an alkenyl halide of formula (III):

$$CH_2=CH-(CH_2)_{s-2}Hal$$

in the presence of a catalytically effective amount of a hydrosilylation catalyst based on a platinum ore metal,

in which formulae:

- the symbol Hal represents a halogen atom chosen from chlorine, bromine and iodine atoms,
- the symbols R^2 and R^3, which are identical or different, each represent a monovalent hydrocarbon group chosen from a linear or branched alkyl radical having from 1 to 6 carbon atoms and a phenyl radical, and
- s represents an integer between 2 and 10 inclusive,

said process being characterized in that, at the end of the hydrosilylation reaction, the product of formula (I) formed is recovered and the catalytic platinum ore metal is recovered, said metal being found in its original form of catalyst or in a converted form, the recovery of said catalytic metal taking place under the following conditions a), b) and c):

a) the recovery of the catalytic metal is carried out:

1. either directly on the reaction medium at the end of the reaction,

2. or on the liquid distillation residue, comprising the byproducts and the platinum ore metal or its derivatives, as is obtained after distillation of the reaction medium in order to separate therefrom the product of formula (I),

b) the catalytic metal is recovered by bringing the reaction medium or the distillation residue into contact with an effective amount of a solid substance which adsorbs the platinum ore metal, and

c) the adsorbent is separated from the platinum ore metal for the purpose of recovering said metal.

2. The process as claimed in claim 1, characterized in that the platinum ore metal is chosen from platinum, iridium, palladium, ruthenium and osmium.

3. The process as claimed in claim 1 or 2, characterized in that s is equal to 3 and the platinum ore metal is iridium.

4. The process as claimed in claim 3, characterized in that the catalyst corresponds to the formula:

$$[Ir(R^4)Hal]_2 \qquad (IV)$$

where:

- the symbol R^4 represents an unsaturated hydrocarbon ligand comprising at least one C=C double bond and/or at least one C≡C triple bond, it being possible for these unsaturated bonds to be conjugated or nonconjugated, said ligand being linear or cyclic (mono- or polycyclic), having from 4 to 30 carbon atoms, having from 1 to 8 ethylenic and/or acetylenic unsaturations and optionally comprising one or more heteroatoms.

5. The process as claimed in claim 4, characterized in that the catalyst is chosen from:

di-μ-chloro-bis(divinyltetramethyldisiloxane)diiridium,

di-μ-chloro-bis(η-1,5-hexadiene)diiridium,

di-μ-bromo-bis(η-1,5-hexadiene)diiridium,
di-μ-iodo-bis(η-1,5-hexadiene)diiridium,
di-μ-chloro-bis(η-1,5-cyclooctadiene)diiridium,
di-μ-bromo-bis(η-1,5-cyclooctadiene)diiridium,
di-μ-iodo-bis(η-1,5-cyclooctadiene)diiridium,
di-μ-chloro-bis(η-2,5-norbornadiene)diiridium,
di-μ-bromo-bis(η-2,5-norbornadiene)diiridium, or
di-μ-iodo-bis(η-2,5-norbornadiene)diiridium.

6. The process as claimed in claim 4 or 5, characterized in that the content of catalyst, calculated as weight of catalyst metal, is greater than 30 ppm, calculated with respect to the total weight of the reaction mixture formed by the products of formulae (I), (II) and (III).

7. The process as claimed in any one of claims 1 to 6, characterized in that, in the case where the adsorption stage is carried out on the distillation residue, the process additionally comprises, after the stage of distillation of the reaction medium, an additional stage in which the liquid residue is brought into contact with water optionally in the presence of an organic solvent which is inert with regard to HHal formed, for the purposes of obtaining an aqueous phase and an organic phase and of hydrolyzing said residue.

8. The process as claimed in any one of the preceding claims, characterized in that the adsorbent is carbon black.

9. The process as claimed in any one of claims 1 to 7, characterized in that the adsorbent is a molecular sieve, a silica, an activated alumina or an ion-exchange resin.

10. The process as claimed in claim 7 or 8, characterized in that the water is added in an amount sufficient for the HHal formed not to be at saturation

in the aqueous phase.

11. The process as claimed in any one of the preceding claims, characterized in that the product of formula (I) is 3-chloropropyldimethylchlorosilane, the product of formula (II) is dimethylhydrochlorosilane and the product of formula (III) is allyl chloride.

12. The process as claimed in any one of the preceding claims, characterized in that the adsorption is carried out batchwise by bringing the adsorbent solid of powder or granule type into contact with the reaction medium or the distillation residue.

13. The process as claimed in any one of claims 1 to 11, characterized in that the adsorption is carried out continuously by bringing an adsorbent solid present in a column or a fixed bed or a cartridge into contact with the reaction mixture or the distillation residue.